

The implementation of digital literacy during the COVID-19 pandemic in Indonesia

Rahma Tri Wulandari

Training Center for Teachers on Civics and Social Studies
Email: rahma3wulandari@gmail.com

ABSTRACT: *The Covid-19 pandemic has hit Indonesia since March 2020 and changed various order of community life. Various efforts have been made to tackle the transmission of this pandemic, including physical distance and lockdown. Academic institutions changed their learning activities, from face-to-face learning to online learning by using technology. Referring to the massive use of technology in the pandemic, digital literacy is needed for all levels of education. The purpose of this article is to describe the policy of digital literacy programs in Indonesia; the government's role during a pandemic in education sector; and the implementation of digital literacy during the pandemic. The study of these three topics are useful for understanding how to increase utilization of digital literacy, and the possibility to develop digital citizenship programs to counterbalance unexpected impact of digital information.*

KEYWORDS: Implementation; digital literacy; pandemic; online learning.

→ Received 05/10/2020 → Revised manuscript received 15/12/2020 → Published 25/12/2020.

1. Introduction

Since the Covid-19 case spread and turned to the pandemic in early 2020, there have been many changes in all aspects, not only in social, cultural, and economic, but also in education (Tzifopoulos, 2020). Billions of the world's population are staying at home, due to the regulation of physical distancing, social distancing and self-quarantine (Abidah et al., 2020). The phenomenon also affects in the field of education, where there is a policy to stop face-to-face learning activities taken by many countries, including Indonesia.

As a follow-up to this policy, The Ministry of Education and Culture the Republic of Indonesia (MOEC) has issued Circular Letter (CL) of the Minister of Education and Culture Education of the Republic Indonesia number 3 of 2020 on the prevention of Covid-19 in educational units, which replaces conventional learning systems by studying from home using online media. This online learning policy automatically also has an impact on others regulations. It is important for MOEC to continue to adjust other policies, especially to be able to present alternative learning during the pandemic.

Responding to the CL, many schools in

Indonesia have started to implement online teaching and learning activities, which is one of the best alternatives, so that the teaching and learning process can still be done without neglecting health protocols (Nuryatin, 2020; Handarini, 2020). Online learning is a learning system which is conducted by not face-to-face so there is no physical interaction between teachers and students, but using a platform that can help the teaching and learning process to be done virtually (Handarini, 2020; Irhandayaningsih, 2020). Furthermore, according to Irhandayaningsih (2020), digital literacy competencies are closely related to the implementation of online learning, so mastery of digital literacy is necessary to deal with this situation.

Digital literacy is a basic skill or ability to use computers confidently, securely, and effectively, including the ability to use software (Anggeraini et al., 2019). Furthermore, digital literacy can also be interpreted as the ability to use digital technology and communication tools to access, manage, analyze, and evaluate information, build new knowledge, communicate with others to participate effectively in society (Asari et al., 2019; A'yuni, 2015). UNESCO defines digital literacy as the ability to use information and

communication technology (ICT), to discover, evaluate, utilize, create and communicate content/information, with cognitive and technical skills (Astuti, 2019). Digital literacy can also be interpreted as life skills that not only involves the ability to use technology, information, and communication devices, but also the ability to socialize, ability in learning, and have attitudes, critical thinking, creative, and inspiring as digital competencies (Nasrullah et al., 2017; Sutrisna, 2020). From some of these definitions, it can be concluded that digital literacy is a skill that not only knows how to use technology, both software, and hardware, but also the ability to understand how to use technology wisely.

In general, softwares that are being used in Indonesia to support online learning during the pandemic includes YouTube, Facebook, WhatsApp, Instagram, Google Classroom, Google Meet, Visco Webex, Zoom, Kahoot, and so on (Abidah et al., 2020). The drastic change in learning methods is not easy. One of the key factors in changing the method is the competence of educators and learners in using technology to manage the online learning process. These capabilities are part of digital literacy, which can be interpreted as the ability to use and manage technology, information, and communication systems (Irhandayaningsih, 2020).

The change in learning methods is not a problem for schools that already have an online academic system, and have resources and facilities (Abidah et al., 2020). But it will be an obstacle for schools that do not yet have an online academic system, supporting resources, and facilities. MOEC understands that online learning will encounter many obstacles in the implementation. Some of the obstacles are related to supporting facilities such as mobile phones or computers, internet networks in the 3T area (lagging, remote, and in the forefront), educator resources that have not been "literate" in technology, lack of parental role in mentoring, and other factors such as the availability of internet quota needs.

On the other hand, the impact of increasing internet use during this pandemic causes other phenomena. Many negative cases appear on

social media users. For example, there are cases related to defamation, humiliation, bullying, and the spread of hoax news that can trigger depression in people who are struggling with Covid-19 (Sutrisna, 2020). This behavior shows that internet users in Indonesia do not understand to use the internet properly and correctly. On the one hand, they can access the network but do not fully understand the consequences of using digital media. This article presents the policy of digital literacy programs in Indonesia, government programs during the pandemic, especially in the field of education, as well as the implementation of digital literacy to support the implementation of online learning during the pandemic.

2. Overview of the history and context of digital literacy skills education in Indonesia

2.1. The Policy of Digital Literacy Programs in Indonesia

Since 2016, the MOEC has socialized the National Literacy Movement program, as part of the implementation of The Minister of Education and Culture Regulation No. 23 of 2015 on The Growth of Ethics (Nugraha & Octavianah, 2020). Six basic literacies should be mastered, including reading and writing literacy, numeracy literacy, science literacy, financial literacy, digital literacy, cultural literacy, and citizenship literacy. Mastery of six basic literacies becomes very important not only for students but also for parents and all citizens (Pratama et al., 2019).

At the level of the education unit, the Directorate General of Primary and Secondary Education which is one of the implementing elements under the auspices of the MOEC has provided various guidelines for the implementation of literacy programs until the assignment of assistance carried out both by the local education office, as well as the provincial Education Quality Assurance Agency. This guideline provides direction on the implementation of digital literacy starting from indicators to strategies of the digital literacy movement that is carried out thoroughly, both in families, schools, and communities. It can be accessed in general through the link <https://gln.kemdikbud.go.id/>.

Digital literacy skill education in Indonesia has started to be deployed. For example, the obligation to collect students through system called DAPODIK (Principal Data of Learners). Teachers are also required to have accounts in a system called SIM PKB (Information System for Sustainable Professional Development management). In general, schools have been using new student admission applications since the zoning system was implemented. Besides, the use of e-report, digital libraries, and other important information are uploaded on the school's website. The anti-hoax movement has also basically been taught to students considering that nowadays the internet is easily accessible. It's just that not all provinces in Indonesia apply the technology because facilities and human resources are still not well prepared.

2.2. Government programs during the pandemic in the field of education

During the pandemic, MOEC created various programs that can support online learning, including: 1) internet quota assistance for students and educators, 2) Home Learning (BDR) programs on TVRI, 3) various programs that can be accessed by educators and learners through the official portal of the MOEC, 4) and Activity-Based Learning program.

First, the internet quota assistance, MOEC published Circular Letter of the Directorate General of Early Childhood Education, Basic Education, and Secondary Education (PAUD-Dikdasmen) Number 8310/C/PD/2020 on Internet Quota Giving Program for students, teachers, and lecturers. Internet quota subsidy is provided for four months, starting from September to December 2020, where students will get 35 GB/month, teachers will get 42 GB/month, students and lecturers 50 GB/month. This program provides convenience for all parties who rely on quotas during online learning during the pandemic.

Besides, the flexibility policy of using school operational assistance funds (BOS) for other paid education services is carried out. This policy is important because during online learning the school needs various operational funds to support

the implementation of learning activities. The flexibility of using BOS funds makes schools more optimal in utilizing all available resources, without worrying about the administrative reports related to operational costs used.

Second, at the beginning of the distance learning period, TVRI as a government television station broadcasts various educational programs to support study from home. The program is designed for all levels of education, from Early Childhood Education (PAUD), Junior High School, and Senior High School. Scheduling is arranged from 08.00 to 14.30 for all levels with a certain duration, and there are also childcare and child educational materials for parents and teachers. The city/district education office also socializes to schools, so that teachers provide information to students regarding the scheduling of each subject.

Third, to support the learning process, MOEC has also released various learning portals that are not only intended for students but also teachers. Among them is the "Rumah Belajar Daring" which can be accessed through <https://belajar.kemdikbud.go.id/>. Teachers and learners can take advantage of the website because it is equipped with a Learning Management System (LMS) that can be used to facilitate the virtual learning process; interesting learning resources with the appearance of images, videos, animations, simulations, evaluations, and games; questions bank, till the virtual laboratory.

"Guru Belajar Seri Masa Pandemi" is also another program which can be accessed through <https://gurubelajar.kemdikbud.go.id/>. This website is useful for teachers to learn how to design and implement distance learning. This is especially important for teachers who still have difficulty using technology during online learning. There is also a "Guru Berbagi" program during the pandemic that can be accessed through <https://guruberbagi.kemdikbud.go.id/>. This website is a collaborative movement of governments, teachers, communities, and education mobilizers to jointly face Covid-19, by sharing ideas and good practices through the learning implementation plan. In addition to some of the above programs, there is also

an interesting socialized G-Suites Education account which is being launch for free.

At the end of 2020, MOEC launched an Activity-Based Learning program, which provides guidelines for teachers to prepare, implement, and assess learning during the pandemic. Various modules and examples of learning videos have been designed for all levels of school and various subjects from PAUD to the high school level. This program aims to provide a meaningful learning experience for learners, without being burdened with the demands of completing all materials, and schools can modify the curriculum independently during the pandemic.

2.3. The implementation of digital literacy during the pandemic

One of the positive sides of the pandemic, teachers in Indonesia are required to be able to “literate” technology and learn the use of various learning software. The following will be discussed the implementation of digital literacy during the pandemic, where data is obtained based on the results of the Worksheet on the online training of Civics Education teacher at junior high school level in Training Center for Teachers on Civics and Sosial Studies (PPPPTK PKn and IPS). A sample of 40 participants, taken from two activities that took place in two stages of online training. The first phase of training was held from 5 to 17 October 2020, while the second stage was held from 18 to 30 November 2020. Each stages was attended by participants from 20 provinces throughout Indonesia, so it is quite representative of the conditions in the field.

The data was taken based on Worksheet 2, especially related to the question of the implementation of learning-based digital literacy (intra curricular) during the pandemic. Based on data processing, 82.5% of respondents or 33 out of 40 trainees use facilities such as Google Classroom and Google Form, supported by the WhatsApp application to facilitate communication. Google Classroom is more widely used, because it is considered easy, practical to use, and does not take too much quota credit. This is in line with some of the research conducted by Alfina (2020),

Harefa & Sumiyati (2020), Mustakim (2020), dan Suhada et al. (2020).

Although still rarely applied, 5% of participants use Zoom and Modular Object-Oriented Dynamic Learning Environment (Moodle) which is considered one of the best software in distance learning. While 12.5% or 5 participants did not do online learning due to the unstable signal network. The area did not have many cases of Covid-19 or in the green zone so students could learn offline.

3. Challenges faced

Although the digital literacy movement has been carried out in Indonesia. However, so far there is still no movement that focuses on digital literacy for academic purposes. So when facing a pandemic which results in online learning, then in its implementation there must be various obstacles, including 1) human resources, 2) not enough supportive facilities, and 3) lack of digital learning skills to digest the online news.

It is undeniable that human resources in Indonesia in the use of digital literacy are still relatively low (Rahmadi & Hayati, 2020). Based on data from the World Digital Competitiveness Ranking, Indonesia’s digital competitiveness ranks 56th out of 62 countries in the world (Kemenkominfo, 2020). This will cause various problems of learning activities carried out online during this pandemic. The ability of teachers who are still not good at in technology, students who have not been directed to find the right source of information, and the lack of parental assistance in guiding children during online learning are some of the obstacles encountered. The role of parents for students in utilizing electronic information sources as a learning resource must be balanced with good digital literacy skills, to participate in providing control in the use of the internet in the learning process during the study from home (Lestari et al., 2018).

Another obstacle in the implementation of online learning is the lack of facilities in the form of internet networks especially for 3T areas (lagging, remote, and forefront) difficulty in internet access, resulting in difficult online-based learning. Some teachers who are participants in

the online training program in PPPPTK PKn and IPS inform that they must travel to the city for 4 hours to get decent internet access. Although previously discussed that the government has held internet quota assistance in the framework of online learning, it will be useless if the internet network is not available. It needs cooperation of the government and various other stakeholders to help facilitate internet access, which is now one of the needs, especially to face the era of industrial revolution 4.0.

As discussed earlier, that digital literacy is not only related to the ability to use digital devices, but also to the ability to be able to use intelligently obtained information. Based on a survey conducted by Ministry of Communication and Information Technology of the Republic of Indonesia (MCIT), digital literacy in 34 provinces is also still low, with a median of 27.9 (from a scale of 0 to 100) for 34 provinces (Kemenkominfo, 2020). Low digital literacy also makes Indonesia facing several threats, starting from the spread of negative content, hateful content, hate speech, bullying, various fraudulent practices to radicalism. For example, based on the results of a survey conducted by MCIT, 53.7% of respondents will share information about garlic that can cure coronavirus.

Misuse of digital technology such as examples of the spread of hoax above can adversely affect personal and social life. Based on the results of research conducted by Chan (2018), most people, especially middle school teenagers who can access the internet and have smartphones do not understand the ethics of communicating in cyberspace. Therefore, digital literacy needs to be developed to in building promoting materials and methods of learning digital literacy in schools and outside schools.

4. Expectations, strategies and support

There are several strategies and supports from the central government, local government, and schools to overcome some obstacles. These strategies focus to overcome the lack of teachers ability in using technology, students readiness in online learning, and the role of parents in supporting their children.

Teachers who have not mastered technology, they follow the workshop or in house training (IHT) mastery of skills in ICT before online learning is enforced. Activities are usually instructed by school operators who are used to using technology, as well as peer tutors. For students, efforts include giving tutorials on how to use the application during the online learning period; mapping students who have not been able to ICT and then giving directions, materials, tutorials, videos, and so on; and also provide student consulting services to communicate the obstacles they face. For parents, the school conducts online socialization with parents about learning methods as well as learning schedules. The group was also formed as a means of communication between teachers and parents about the implementation of learning and motivate parents to always work together to control their children in learning. The teacher also works with parents to conduct supervision during the lesson.

At the city/district office level, try to support the assignment to the school operator to help teachers design applications or LMS. Support also comes from the cooperation between the MCIT and various non-governmental circles through the National Movement for Digital Literacy (GNLD) "SiBerkreasi" which focuses on tackling negative content on the internet, such as hoaxes, hate speech, cyberbullying, pornography, fraud, and radicalism (Rahmadi & Hayati, 2020). Providing adequate digital literacy, millennials need to be able to encourage the realization of a good digital citizen, both of in the digital world and the real world.

Based on the explanation above, strategies and supports are important to carry out in synergy between government agencies, both from the central to regional levels. Similarly, cooperation between "Three Education Centers", namely families, schools, and communities. With good cooperation, all the obstacles that exist can certainly be overcome.

5. Conclusions

This article gives an overview of how digital literacy policy in Indonesia, before and during

facing Covid-19. Despite facing many obstacles during the time of the implementation, as a big country, Indonesia must be able to overcome all problems. This is an evidence proving that Indonesia is completely ready to all possibilities, by sharing programs to support online education services by involving various stakeholders.

Next studies should be about developing digital literacy for academic purposes, as well as increasing the awareness of Indonesian people to be more better and wiser in using

and disseminating information. It needs to be designed a digital citizenship program that is more real than just socialization that sometimes is still not on target and theoretical. Hopefully, Covid-19 will end soon so learning activities can be back to normal with direct interacting between teachers and students, because no matter how successful is online learning, it will not be able to replace face-to-face learning patterns that involve direct interaction between teachers and students.

References

- Abidah, A., Hidaayatullaah, H. N., Simamora, R. M., Fehabutar, D., & Mutakinati, L. (2020). The Impact of Covid-19 to Indonesian Education and Its Relation to the Philosophy of "Merdeka Belajar." *Studies in Philosophy of Science and Education*, 1(1), 38-49. <https://doi.org/10.46627/sipose.v1i1.9>.
- Alfina, O. (2020). Penerapan Lms-Google Classroom Dalam Pembelajaran Daring Selama Pandemi Covid-19. *Majalah Ilmiah METHODODA*, 10(1), 38-46. <https://doi.org/10.46880/methoda.v10i1.537>.
- Anggeraini, Y., Faridi, A., Mujiyanto, J., & Bharati, D. A. L. (2019). Literasi Digital: Dampak dan Tantangan dalam Pembelajaran Bahasa. *Universitas Negri Semarang*, 386-389.
- Asari, A., Kurniawan, T., Ansor, S., Bagus, A., & Rahma, N. (2019). Kompetensi Literasi Digital Bagi Guru Dan Pelajar Di. *BIBLIOTIKA: Jurnal Kajian Perpustakaan Dan Informasi*, 3, 98-104.
- Astuti, E. Z. L. (2019). Gerakan Literasi Digital: Studi Pemberdayaan Pemuda Melalui Program Sistem Informasi Potensi Kreatif Desa di Kulonprogo. *Jurnal Pemberdayaan Masyarakat: Media Pemikiran Dan Dakwah Pembangunan*, 3(2). <https://doi.org/10.14421/jpm.2019.032-05>.
- Handarini, O. I. (2020). Pembelajaran Daring Sebagai Upaya Study From Home (SFH) Selama Pandemi Covid 19 Oktafia. *Jurnal Pendidikan Administrasi Perkantoran (JPAP)*, 8(3), 496-503. <https://doi.org/10.1093/fampra/cm005>.
- Harefa, N., & Sumiyati, S. (2020). Persepsi Siswa terhadap Google Classroom sebagai LMS pada masa Pandemi Covid-19. *Science Education and Application Journal*, 2(2), 88. <https://doi.org/10.30736/seaj.v2i2.270>.
- Irhandayaningsih, A. (2020). Pengukuran Literasi Digital Pada Peserta Pembelajaran Daring di Masa Pandemi COVID-19. *Anuva*, 4(2), 231-240.
- Kemkominfo. (2020). *Status Literasi Digital Indonesia 2020*.
- Mustakim. (2020). Efektivitas Pembelajaran Daring Menggunakan Media Online Selama Pandemi Covid-19 Pada Mata Pelajaran Matematika the Effectiveness of E-Learning Using Online Media During the Covid-19 Pandemic in Mathematics. *Al Asma: Journal of Islamic Education*, 2(1), 1-12.
- Nasrullah, R., Aditya, W., Satya, T. I., Nento, M. N., Hanifah, N., Miftahussururi, & Akbari, Q. S. (2017). *Materi Pendukung Literasi Digital: Gerakan Literasi Nasional*. 33. <https://gln.kemdikbud.go.id/glnsite/wp-content/uploads/2017/10/cover-materi-pendukung-literasi-finansial-gabung.pdf>.
- Nugraha, D., & Octavianah, D. (2020). Diskursus Literasi Abad 21 Di Indonesia. *Jurnal Pendidikan Edutama*, 7(1), 107-127.
- Nuryatin, S. (2020). *Adaptasi Metode Pembelajaran Melalui E-Learning Untuk Menghadapi Era New Normal*.
- Pratama, W. A., Hartini, S., & Misbah, M. (2019). Analisis Literasi Digital Siswa Melalui Penerapan E-Learning Berbasis Schology. *Jurnal Inovasi Dan Pembelajaran Fisika*, 6(1), 9-13.
- Rahmadi, I. F., & Hayati, E. (2020). Literasi Digital, Massive Open Online Courses, dan Kecakapan Belajar Abad 21 Mahasiswa Generasi Milenial. *Jurnal Studi Komunikasi Dan Media*, 24(1), 91. <https://doi.org/10.31445/jskm.2020.2486>.
- Suhada, I., Kurniati, T., Pramadi, A., Listiawati, M., Biologi, P. P., Gunung, S., & Bandung, D. (2020). Pembelajaran Daring Berbasis Google Classroom Mahasiswa Pendidikan Biologi Pada Masa Wabah Covid-19. *Digital Library UIN Sunan Gunung Jati, 2019*, 1-9. <http://digilib.uinsgd.ac.id/30584/>.
- Sutrisna, I. P. G. (2020). Gerakan Literasi Digital Pada Masa Pandemi Covid-19. *Stilistika: Jurnal Pendidikan Bahasa Dan Seni*, 8(2), 268-283. <https://doi.org/10.5281/zenodo.3884420>.